

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:) Group Art Unit:
DRAKE et al.)
Serial No.: Not Yet Assigned)
Filed: Herewith)
Atty. File No.: 4471-1-DIV-CON)
For: "METHOD AND SYSTEM FOR
MINING HYDROCARBON-
CONTAINING MATERIALS")

INFORMATION DISCLOSURE
STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached Form PTO-1449 are being called to the attention of the Examiner.

Copies of the cited references:

Are enclosed herewith.

Are not enclosed, in accordance with 37 C.F.R. 1.98(d), because the references were submitted to the U.S. Patent and Trademark Office in prior pending application Serial No. 10/272,852 filed October 16, 2002, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

To the best of applicants' belief, the pertinence of the foreign-language references are believed to be summarized in the attached English abstracts and in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

Examiner's attention is drawn to the following co-pending applications, copies of which have been or are being submitted:

Serial No. 10/272,852 filed October 16, 2002

Serial No. 09/797,886 filed March 5, 2001

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

<input checked="" type="checkbox"/>	<p>37 CFR 1.97(b): No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith satisfies one of the following conditions ("X" indicates satisfaction):</p> <ul style="list-style-type: none"><input type="checkbox"/> Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or<input type="checkbox"/> Within three months of the date of entry into the national stage of an international application as set forth in 37 CFR 1.491 or<input checked="" type="checkbox"/> Before the mailing date of a first Office Action on the merits, or<input type="checkbox"/> Before the mailing of a first Office action after the filing of a Request for Continued Examination (RCE) under 37 CFR 1.114. <p>Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.</p>
<input type="checkbox"/>	<p>37 CFR 1.97(c): The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of one of the following conditions:</p> <ol style="list-style-type: none">(1) a final action under 37 C.F.R. 1.113 or(2) a notice of allowance under 37 C.F.R. 1.311, or(3) an action that otherwise closes prosecution in the application. <p>This Information Disclosure Statement is accompanied by:</p> <ul style="list-style-type: none"><input type="checkbox"/> A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"><input type="checkbox"/> A check in the amount of \$180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970.
<input type="checkbox"/>	<p>37 CFR 1.97(d): This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c).</p> <ul style="list-style-type: none"><input type="checkbox"/> This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) <p style="text-align: center;">AND</p> <ul style="list-style-type: none"><input type="checkbox"/> Applicants hereby requests consideration of the reference(s) disclosed herein. Enclosed is the fee in the amount of \$180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970. Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970. <p>Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.</p>

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

The undersigned certifies that:

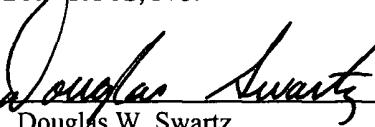
- Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).
- A copy of the communication from the foreign patent office is enclosed.

OR

- No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

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Date: July 23, 2003
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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 4471-1-DIV-CON	SERIAL NO. Not Yet Assigned
	APPLICANT DRAKE et al.	
	FILING DATE Herewith	GROUP ART

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROP.
1	6,206,478	03/27/01	Uehara et al.	299	33	
2	6,027,175	02/22/00	Seear et al.	299	18	
3	6,017,095	1/25/00	DiMillo	299	56	
4	5,890,771	4/6/99	Cass	299	31	
5	5,879,057	03/09/1999	Schwoebel et al.	299	17	
6	5,852,262	12/22/98	Gill et al.	181	106	
7	5,831,934	11/3/98	Gill et al.	367	25	
8	5,697,676	12/16/97	Kashima et al.	299	60	
9	5,330,292	07/1994	Sakanishi et al.	299	1.05	
10	5,211,510	5/18/93	Kimura et al.	405	184	
11	5,205,613	4/27/93	Brown, Jr.	299	31	
12	5,125,719	6/30/92	Snyder	299	31	
13	4,946,579	08/07/90	Sury	210	705	
14	4,856,936	08/15/1989	Hentschel et al.	405	145	
15	4,808,030	2/28/89	Takegawa	405	146	
16	4,793,736	12/27/88	Thompson et al.	405	146	
17	4,774,470	09/1988	Takigawa et al.	175	50	
18	4,607,889	8/26/86	Hagimoto et al.	299	33	
19	4,603,909	8/5/86	LeJeune	299	7	
20	4,505,516	3/19/85	Shelton	299	2	
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EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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	26	4,209,268	06/24/1980	Fujiwara et al.	405	147	
	27	4,203,626	5/20/80	Hamburger	299	33	
	28	4,167,290	9/11/79	Yamazaki et al.	299	1	
	29	4,152,027	5/1/79	Fujimoto et al.	299	1	
	30	4,072,018	02/1978	Alvarez-Calderon	264	32	
	31	4,067,616	1/10/78	Smith et al.	299	7	
	32	3,960,408	6/1/76	Johns	299	19	
	33	3,941,423	3/2/76	Garte	299	8	
	34	3,888,543	06/1975	Johns	299	11	
	35	3,784,257	1/8/74	Lauber et al.	299	31	
	36	3,778,107	12/11/73	Haspert	299	11	
	37	3,678,694	7/25/72	Haspert	61	84	
	38	3,034,773	5/15/62	Legatski	262	2	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
	39	2,358,805	01/24/01	Canada	E21C	41/26	X	
	40	2,332,207	01/24/01	Canada	E21C	41/26	X	
	41	2,315,596	05/04/00	Canada	B03B	9/02	X	
	42	2,222,668	11/26/97	Canada	C10G	1/04	X	
	43	2,124,199	11/22/91	Canada	B03B	9/02	X	
	44	1,167,238	05/15/84	Canada	B01J	8/10	X	
	45	1,165,712	04/17/84	Canada	C10G	1/04	X	
	46	986544	3/30/76	Canada				

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48	Babendererde et al., "Extruded Concrete Lining – The Future Lining Technology for Industrialized Tunnelling," 2001 RETC Proceedings, Chapter 55, pp. 679-685.
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50	Becker, C., "The Fourth Tube of the Elbe-Tunnel – Built by the World's Largest Soft Ground Tunnelling Machine, 2001 RETC Proceedings, Chapter 17, pp. 182-186.
51	Becker, C., "The Choice Between EPB- and Slurry Shields: Selection Criteria by Practical Examples," 1995 RETC Proceedings, Chapter 31, pp. 479-492.
52	Bergling et al., "Main Bearings for Advanced TBMS," 1995 RETC Proceedings, Chapter 32, pp. 493-508.
53	Borm, G., "Integrated Seismic Imaging System for Geological Prediction Ahead in Underground Construction," 2001 RETC Proceedings, Chapter 22, pp. 263-271.
54	"Canadian coal given the TBM treatment at Cape Breton"; Reprinted from <u>Tunnels & Tunnelling</u> , May 1985; 4 pgs.
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56	Corti et al., "Athabasca Mineable Oil Sands: The RTR/Gulf Extraction Process Theoretical Model of Bitumen Detachment," The 4 th UNITAR/UNDP International Conference on Heavy Crude and Tar Sands Proceedings, Vol. 5, Edmonton, AB, Aug. 7-12, 1988, pp. 41-44, 71.
57	Dowden et al., "Coping with Boulders in Soft Ground TBM Tunneling," 2001 RETC Proceedings, Chapter 78, pp. 961-977.
58	Doyle et al., "Construction of Tunnels in Methane Environments," 1991 RETC Proceedings, Chapter 12, pp. 199-224.
59	Drake, R., "An Innovative Approach for the Underground Mining of Oil Sands," presented at North American Tunneling 2002, Seattle, WA May 2002 and NARMS-TAC 202, Mining and Tunneling Innovation and Opportunity Conference, Toronto, Ontario, July 2002, 8 pages.
60	Drake et al., "A Promising New Concept for Underground Mining of Oil Sands," technical papers presented to Canadian Institute of Mining (CIM), Ft. McMurray, June 13-15, 2001, pp. 1-16.
61	Friesen et al.; "Monitoring of Oil Sand Slurries by On-line NIR Spectroscopy"; Petroleum Society of CIM & Austra; paper no. 94.10; 9 pages.
62	Funasaki et al., "World's Largest Slurry Shield Tunneling Report in Trans-Tokyo Bay Highway Construction," 1997 RETC Proceedings, Chapter 36, pp. 591-604.
63	Guetter et al., "Two Tunnels in Totally Different Geological Formations Driven by the Same 7M Double-Shield TMB with an Extremely Thin-Walled Monoshell Honeycomb Segmental Lining System," 2001 RETC Proceedings, Chapter 21, pp. 241-260.

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64	Harris et al.; "Feasibility Study of Underground Mining of Oil Sand"; AOSTRA Seminar on Underground excavation in Oil Sands; May 19, 1978; 33 pages.
65	Herrenknecht et al., "The New Generation of Soft Ground Tunnelling Machines," 1999 RETC Proceedings, Chapter 36, pp. 647-663.
66	Higashide et al., "Application of DOT Tunneling Method to Construction of Multi-Service Utility Tunnel Adjacent to Important Structures," 1995 RETC Proceedings, Chapter 34, pp. 527-541.
67	Hignett et al.; "Tunnelling Trials in Chalk: Rock Cutting Experiments"; TRRL Laboratory Report 796; 1977.
68	Hunter et al.; "Design, development, and verification of a Lovat 7.6-metre full-face tunnel-boring machine"; CIM Coal Developments; 8 pages.
69	"Improving Profitability With New Technology," Joint Paper Between Petrel Robertson and Oil Sands Underground Mining, Inc., Edmonton, Alberta, September 2001, 44 pages.
70	Jacobs et al., "Hydrogen Sulfide Controls for Slurry Shield Tunneling in Gassy Ground Conditions – A Case History," 1999 RETC Proceedings, pp. 221-239.
71	Liu et al.; "Volume reduction of oil sands fine tails utilizing nonsegregating tailings"; Tailings and Mine Waste '96; pps. 73-81.
72	Lovat Inc. Company Brochure
73	Maciejewski; "Hydrotransport - An Enabling Technology for Future Oil Sands Development"; Syncrude Canada Ltd.; pps. 67-79.
74	Marcheselli et al., "Construction of the 'Passante Ferroviario' Link in Milano, Lots 3P - 5P - 6P Excavation by Large Earth Pressure Balanced Shield with Chemical Foam Injection," 1995 RETC Proceedings, Chapter 36, pp. 549-572.
75	Marsh et al.; "Design, Excavation, Support of a Large Diameter Coal Mine Access Decline Using a Tunnel Boring Machine"; Chapter 11; RETC Proceedings, Vol. 1; pps. 155-176.
76	Matthews et al.; "Development of composite tailings technology at Syncrude Canada"; Syncrude EDM Research; 2000; pps. 455-463.
77	McCormick et al.; "Analysis of TBM Performance at the Record Setting River Mountains Tunnel #2; Chapter 8; 1997 RETC Proceedings; pps. 135-149.
78	Mikula et al.; "Oil Sands Conditioning, Bitumen Release Mechanisms, and New Process Development"; Alberta Oil Sands Information Services; 1993; 8 pgs.
79	Mikula et al.; "Commercial Implementation of a Dry Landscape Oil Sands Tailings Reclamation Option: Consolidated Tailings"; Alberta Oil Sands Information Services; No. 1998.096; pps. 907-921.
80	Mitsubishi Shield Machine Article; by Mitsubishi Heavy Industries, Ltd.; 33 pages.
81	Moulton et al., "Tunnel Boring Machine Concept for Converging Ground," 1995 RETC Proceedings, Chapter 33, pp. 509-523.
82	Oil Sands Underground Mining, Inc., "A New Technology for the Recovery of Oil Sands," presented at combined Oil Sands Task Force and Black Oil Pipeline Network Meeting, June 2001, 30 pages.
83	Oil Sands Underground Mining, Inc., "Underground Mining of Oil Sands," presented at National Oil Sands Task Force, January 2001 Quarterly Meeting, 38 pages.

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84	Oil Sands Underground Mining, Inc., "A Private Sector Approach to Design/Build," presented at NAT 2002, 34 pages.
85	Ounanian et al.; "Development of an Extruded Tunnel Lining System" Chapter 81; 1981 <u>RETC Proceedings</u> Vol. 2; pps. 1333-1351.
86	Ozdemir et al.; "Development of a Water Jet Assisted Drag Bit cutting Head for Coal Measure Rock" Chapter 41; <u>RETC Proceedings</u> , Vol. 2; 1983; pps. 701-718
87	Paine et al.; "Understanding hydrotransport: The key to Syncrude's success"; CIM Bulletin; Vol. 92; 1999; pps. 105-108.
88	Peer; "Giant rock TBM to drive access tunnels under ocean"; reprinted from Heavy Construction News; Sept. 19, 1983; 2 pgs.
89	Press Release; Slurries.wpd; Jan Czarnecki; 3 pages.
90	Richards et al., "Slurry Shield Tunnels on the Cairo Metro," 1997 RETC Proceedings, Chapter 44, pp. 709-733.
91	Rose, D., "Steel-Fiber-Reinforced-Shotcrete for Tunnels: An International Update," 1999 RETC Proceedings, pp. 525-536.
92	Sager, H., "Underpassing the Westerschelde by Implementing New Technologies," 1999 RETC Proceedings, pp. 927-938.
93	Stokes et al.; "Cutting head ventilation of a full face tunnel boring machine"; Cape Breton Coal Research Laboratory, CANMET, Sydney, Canada; pps. 305-311.
94	Sunburst Excavation - IN FOCUS; November 1993, 18-19, 22-23.
95	Uchiyama, S., "Twin TBM with Four Cutters for Subway Station (Roppongi Station in the Tokyo Metro Line 12)," 1999 RETC Proceedings, Chapter 37, pp. 665-674.
96	Wang et al.; "High Pressure Water Jet Assisted Tunnelling" Chapter 34; 1976 RETC Proceedings; pps. 649-676.
97	Wu et al., "Stress Analysis and Design of Tunnel Linings," Chapter 26, pp. 431-455.
98	Yoshidawa et al.; "A Study of Shield Tunnelling Machine (Part 1) - Soil Condition for Pressurized Slurry Shield to be Adapted-"; Translation Copy of Hitachi Zosen Technical Review; Vol. 42; No. 1-4; 1981; 38 pages.
99	Young et al.; "Full-scale Testing of the PCF Rock Excavation Method"; <u>VIII Australian Tunnelling Conference</u> ; Aug. 1993. Pps. 259-264.

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